

Source Control Meeting w/Dan Opalski
01/28/2008

Purpose of Meeting: In a meeting between Kristine Koch, RPM Portland Harbor, and ODEQ (Jim Anderson and Matt McClincy) on December 19, 2007, it was discovered that the RPM and ODEQ had differing opinions regarding what constituted source control. ODEQ wants the Office Director, Dan Opalski, to deliver the message to ODEQ regarding what constitutes source control.

Questions for Discussion:

1. What is the definition of Source Control?
2. What constitutes Upland Source Control?
3. Do we need a final upland remedy or is interrupting the pathway good enough for source control (current control vs. long-term control)?
4. How do we know if an Upland Control is effective? What kind of information do we need and for how long?
5. What happens when the upland remedy fails – are they now part of the site again?
6. What do we do about the Draft Gasco letter? DEQ stated that they are OK with the letter if we indicate in the letter that the actions we propose are implemented under upland ROD. They viewed this action as an interim measure to exclude the uplands of the GASCO site from the PH SS and to allow EPA to proceed with a NTCRA offshore of GASCO. (refer to copy of draft GASCO letter).

Kristine's View of Source Control – Meets NCP 9 Criteria

The “Site” is defined as the areal extent of contamination. Since DEQ has not conducted an uplands RI/FS for the “Site”, EPA will not be able to fully link upland sources with in-water contamination. If there was a source in the uplands that is controlled, the uplands is still part of the site as long as the source exists. If the control mechanism meets the NCP 9 criteria, then the source is deemed to be adequately controlled and the ROD will not require further action. If the source is not adequately characterized or the control mechanism does not meet the NCP 9 criteria, then the ROD needs to speak to how this source will be controlled post-ROD. Interruption of the pathway is not always an effective source control mechanism and it cannot be proven to be effective when there is no monitoring to determine the effectiveness of the control.

NCP 9 Criteria

Threshold Criteria

- Overall protection of human health and the environment
- Compliance with ARARs

Balancing Criteria

- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume through treatment
- Short-term effectiveness
- Implementability
- Cost

Modifying criteria

- State (support agency) acceptance
- Community acceptance

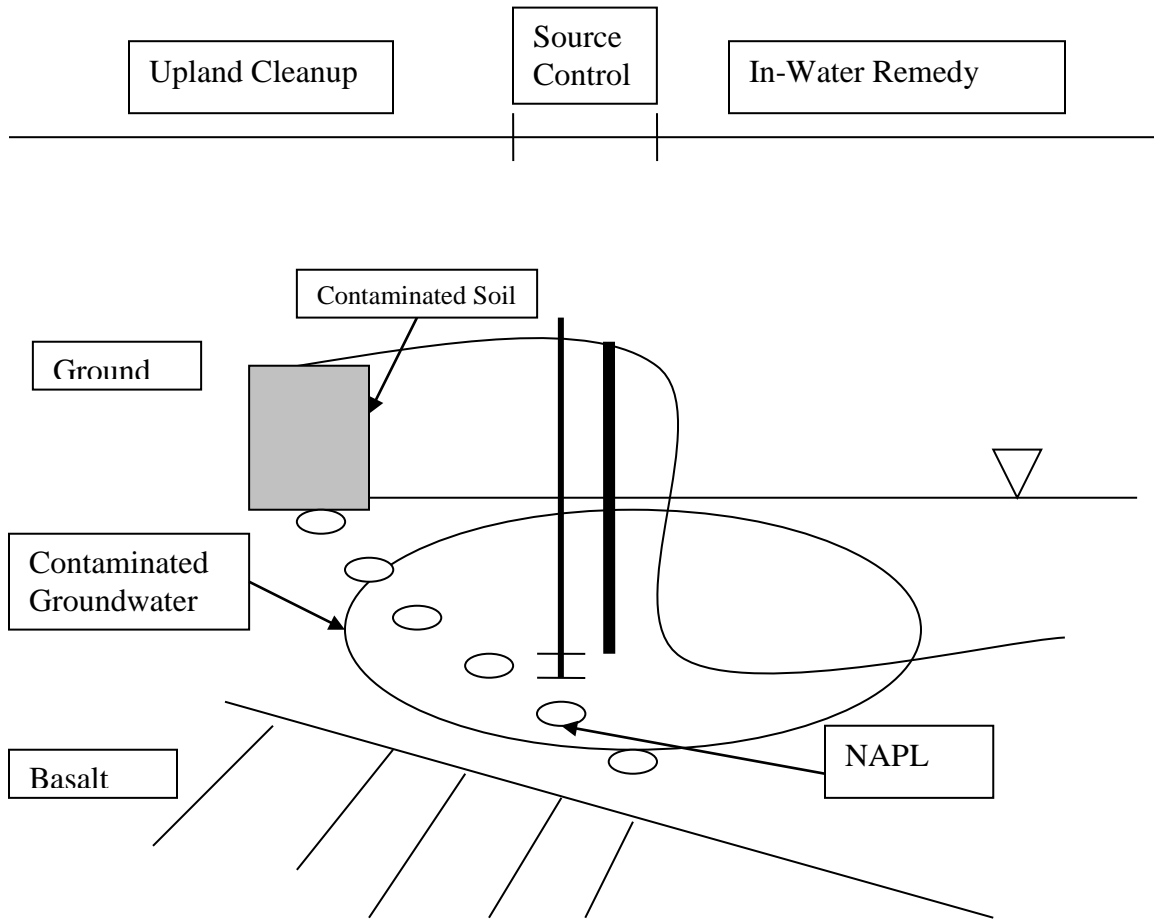
Sites where interrupting the pathway only has not worked:

- Wyckoff Eagle Harbor which started as a hydraulic containment and then developed into a barrier wall with inside pumping.
- Time Oil in Tacoma is border line, it is away from surface waters, but near a large well field which creates similar problems, and system is under-designed to fully capture the plume.
- Occidental had major problems on this topic
- Rhone Poulenc (Duwamish) decided early on that hydraulic control only would not work and went to wall and pumping
- Not sure yet about other sites where we do have walls but no pumping systems inside, such as PSR and McCormick & Baxter.

DEQ's View of Source Control – Interruption of the pathway

DEQ feels that interrupting the pathway is upland source control and that once the pathway has been interrupted, the upland portion of the site is no longer part of the Portland Harbor Superfund Site, not subject to CERCLA, and DEQ can progress on the upland cleanup under their own cleanup laws and schedule without EPA involvement.

The following is a picture that DEQ presented to me at 12/20/2007 meeting in Portland regarding the GASCO upland site:



EPA Laws, Regulations, and Guidance Regarding Source Control

NCP 300.5

Source control action is the construction or installation and start-up of those actions necessary to prevent the continued release of hazardous substances or pollutants or contaminants (primarily from a source on top of or within the ground, or in buildings or other structures) into the environment.

Source control maintenance measures are those measures intended to maintain the effectiveness of source control actions once such actions are operating and functioning properly, such as the maintenance of landfill caps and leachate collection systems.

HRS definition of Source

Any area where a hazardous substance has been deposited, stored, disposed, or placed, plus those soils that have become contaminated from migration of a hazardous substance. Sources do not include those volumes of air, groundwater, surface water, or surface water sediments that have become contaminated by migration, except: in the case of either a groundwater plume with no identified source or contaminated surface water sediments with no identified source, the plume or contaminated sediments may be considered the source.

Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites **OSWER Directive 92.85.6-08, First Risk Management Principle**

Control Sources Early.

As early in the process as possible, site managers should try to identify all direct and indirect continuing sources of significant contamination to the sediments under investigation. These sources might include discharges from industries or sewage treatment plants, spills, precipitation runoff, erosion of contaminated soil from stream banks or adjacent land, contaminated groundwater and non-aqueous phase liquid contributions, discharges from storm water and combined sewer outfalls, upstream contributions, and air deposition.

Next, site managers should assess which continuing sources can be controlled and by what mechanisms. It may be helpful to prioritize sources according to their relative contributions to site risks. In the identification and assessment process, site managers should solicit assistance from those with relevant information, including regional Water, Air, and PCB Programs (where applicable); state agencies (especially those responsible for setting Total Maximum Daily Loads (TMDLs) and those that issue National Pollutant Discharge Elimination System (NPDES) permits); and all Natural Resource Trustees.

Local agencies and stakeholders may also be of assistance in assessing which sources can be controlled (*depending on program delegations, authorizations, or permits to state/local levels*). [italics added.]

Site managers should evaluate the potential for future recontamination of sediments when selecting a response action. If a site includes a source that could result in significant recontamination, source control measures will likely be necessary as part of that response action. However, where EPA believes that the source can be controlled, or where sediment remediation will have benefits to human health and/or the environment after considering the risks caused by the ongoing source, it may be appropriate for the Agency to select a response action for the sediments prior to completing all source control actions. This is consistent with principle #5 below, which indicates that it may be necessary to take phased or interim actions (e.g., removal of a hot spot that is highly susceptible to downstream movement or dispersion of contaminants) to prevent or address environmental impacts or to control human exposures, even if source control actions have not been undertaken or completed.

Contaminated Sediment Remediation Guidance for Hazardous Waste Sites
EPA-540-R-05-012, OSWER Directive 9355.0-85, Section 2.6

Source Control.

Identifying and controlling contaminant sources typically is critical to the effectiveness of any Superfund sediment cleanup. Source control is generally defined for the purposes of this guidance as those efforts are taken to eliminate or reduce, to the extent practicable, the release of contaminants from direct and indirect continuing sources to the waterbody under investigation. At some sediment sites, the original sources of the contamination have already been controlled, but subsequent sources such as contaminated floodplain soils, storm water discharges, and seeps of groundwater or non-aqueous phase liquids (NAPLs) may continue to introduce contamination to a site. At sites with significant sediment mobility, areas of higher contaminant concentration may act as continuing sources for less-contaminated areas.

Some sources, especially those outside the boundaries of the Superfund or RCRA site, may best be handled under another authority, such as the CWA or a state program. These types of sites can present an opportunity for partnering with private industry and other governmental entities to identify and control sources on a watershed basis. Water bodies with sources outside the Superfund site can also present a need to balance the desire for watershed-wide solutions with practical considerations affecting a subset of responsible parties. It can be difficult to determine the proper party to investigate sources outside the Superfund site, but the site RI/FS must be sufficient to determine the extent of contamination coming onto the site and its likely effect on any actions at the site. A critical question often is whether an action in one part of the watershed is likely to result in significant and lasting risk reduction, given the probable timetable for the other actions in the watershed.

Source control activities are often broad-ranging in scope. Source control may include application of regulatory mechanisms and remedial technologies to be implemented according to ARARs, including the application of technology-based and water quality-based National Pollutant Discharge Elimination System (NPDES) permitting to achieve and maintain sediment cleanup levels. Source control actions may include, among others, the following:

- Elimination or treatment of contaminated waste water or ground water discharges (e.g., installing additional treatment systems prior to discharge);
- Isolation or containment of sources (e.g., capping of contaminated soil) with attendant engineering controls;
- Pollutant load reductions of point and nonpoint sources based on a TMDL;
- Implementation of best management practices (e.g., reducing chemical releases to a storm drain line); and
- Removal or containment of potentially mobile sediment hot spots.

EPA's Contaminated Sediment Management Strategy (EPA 823/R-98/001) includes some discussion of EPA's strategy for abating and controlling sources of sediment contamination. Source control activities may be implemented by state or local governments using combinations of voluntary and mandatory actions. **The 1st goal of 4 in this strategy is to prevent the accumulation of contamination in sediments.**

The identification of continuing sources and an evaluation of their potential to re-contaminate site sediment are often essential parts of site characterization and the development of an accurate conceptual site model, regardless of source areas within the site. When there are multiple sources, it is often important to prioritize sources to determine the relative significance of continuing sources versus on-site sediment in terms of site risks to determine where to focus resources. Where sources are a part of the site, project managers should develop a source control strategy or approach for the site as early as possible during site characterization. Where sources are outside the site, project managers should encourage the development of source control strategies by other authorities, and understand those strategies. Generally, a source control strategy should include plans for identifying, characterizing, prioritizing, and tracking source control actions, and for evaluating the effectiveness of those actions. It is also useful to establish milestones for source control that can be linked with sediment remedial design and cleanup actions. If sources can be substantially controlled, it is normally very important to reevaluate risk pathways to see if sediment actions are still needed. If sources cannot be substantially controlled, it is typically very important to include these ongoing sources in the evaluation of what sediment actions may or may not be appropriate and what RAOs are achievable for the site.

Generally, significant continuing upland sources (including ground water, NAPL, or upgradient water releases) should be controlled to the greatest extent possible before sediment cleanup. Once these sources are controlled, project managers should evaluate the effectiveness of the actions, and should refine and adjust levels of source control, as warranted. In most cases, before any sediment action is taken, project managers should

consider the potential for recontamination and factor that potential into the remedy selection process. If a site includes a source that could result in significant recontamination, source control measures will be likely necessary as part of that response action. However, where sediment remediation is likely to yield significant benefits to human health and/or the environment after considering the risks caused by an unaddressed or ongoing source, it may be appropriate to conduct an action for sediment prior to completing all land-based source control actions.

Preamble to the proposal to add the PH site to the NPL (65 FR 46131, July 27, 2000)

The Preamble states:

“...the site consists of all contaminated areas within the area used to identify the site, as well as any other location to which contamination from that area has come to be located, or from which that contamination came.”

Support Document for the Revised NPL – Final Rule, December 2000

These are statements EPA made in this document:

- EPA is not limiting the extent of the site being added to the NPL to the in-water sediments.
- Neither the Principles nor the site listing affect the areal extent of the NPL site for purposes of remedial action or natural resource damages, and CERCLA authorities will continue to be available to address upland sources of contamination, as appropriate.
- The Principles address only EPA’s co-management of the Site with the State. EPA notes that the Principles document does not establish a legal requirement on EPA, and the document does not legally bind EPA to any particular course of action.
- It is in [the] RI/FS stage of the investigation process that the linkage of the sediments to specific originating sources can be accomplished.